

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks is respectfully requested.

Claim amendments/Status

In this response, the examined claims are maintained as they currently stand and, since the action is non-final, further new dependent claims claiming a water cooled heat exchanger and calling for the defrosting bypass pipe to branch from a point between the water cooled heat exchanger and the heat exchanger wherein heat is exchanged between the incoming and outgoing refrigerant air, are added. In brief, claims 1-14 are maintained without amendment, and new claims 15-20 are presented for examination.

Claims 1-20 are now pending in the application. The newly presented claims are submitted as being patentable in that they depend from allowable independent claims and themselves set forth subject matter which is neither disclosed in or rendered obvious by the disclosures of the references cited in this Office Action.

Rejections under 35 USC § 103

- 1) The rejection of claims 1-3, 10 and 12-14 under 35 USC § 103(a) as being unpatentable over JP 11-132582 to Satoshi (KATO) – hereinafter Satoshi, taken with Sakai et al., is respectfully traversed.

In this rejection, the Examiner admits that Satoshi fails to suggest that a defrosting bypass pipe which branches from a point upstream of the heat exchanger directly to the defroster. The Examiner nevertheless notes that Satoshi discloses an ice trap 20 which removes moisture from the refrigerated air discharged from the expansion turbine 10.

To overcome the above admitted shortcoming, the Examiner cites Sakai et al. (hereinafter Sakai) which discloses a defrost arrangement associated with an ice maker

to suggest that the claimed structure would be obvious. However, in traverse, it is pointed out that Satoshi already provides an arrangement to provide a supply of warm air to the mesh filter ice trap 20. This arrangement includes valve 15 and bypass passage 14 and a dual passage configuration. The function and use of this arrangement is disclosed in paragraphs [0021] – [0026].

It is submitted that there is no reason to modify Satoshi. Indeed, it is asserted that tapping off the hot air after two heat exchangers is deliberate and suggestive that warm air rather than hot air is preferred in this reference. Sakai, on the other hand, discloses a dryer 30 which is used to remove water from the refrigerant but which is not heated. Thus, irrespective of the fact that Sakai has a defrost mode, and taps off a flow of working fluid immediately downstream of the compressor, Applicants fail to see that Sakai contains any disclosure that would lead the hypothetical person of ordinary skill to modify the Satoshi arrangement in the manner purported to be obvious, and accordingly, it appears that the rejection may be founded on hindsight knowledge of the claimed subject matter.

The position that it would be obvious to replace the ice trap of Satoshi with a defroster of the nature found in Sakai et al. is submitted as not being well taken in that with the Satoshi arrangement, the ice which taken out of the working fluid of Satoshi is melted and exhausted with the express merit of removing dust and microbes which have become entrained in the working fluid as it passes through the cooling chamber B – see paragraph [0029] of Satoshi.

With Sakai the working fluid is neither purified nor capable of being purified in this manner. Indeed, the ice maker of Sakai is such that the working fluid is a conventional refrigerant as different from air such as used in Satoshi. Therefore, even though Sakai also has a defrost mode, there is a fundamental difference between the two arrangements and the proposed modification which requires what must be assumed to be a wholesale replacement of devices would, without further modification tend to

render the Satoshi arrangement at least partially inoperative for the intended purpose of dust and microbial removal.

A further drawback that should be expected is that Satoshi is such that during defrost two circuits are simultaneously established – see paragraph [0026] of Satoshi. This dual circuit is not found in Sakai and if a transfer of teachings of the nature found in Satoshi were to be considered it is not clear if the dual circuit intention of Satoshi would not be violated.

In a nutshell, the Satoshi system has merit that would appear to be interfered with by the proposed transfer of teachings from Sakai. That is to say, Satoshi discloses a fully workable arrangement which is not in need of modification and would not improve the efficiency of the ice removal process in the manner purported at the top of page 4 of this Office Action.

Indeed, the position that the proposed modification would result in the shortest route thus minimizing energy loss and possible leakages is merely supposition on behalf of the Examiner and not founded on any solid premise or evidence. That is to say, it is not clear that the arrangement schematically disclosed in Sakai would actually result in a flow path which was shorter. As to leaks and the like, this problem is hardly an issue in this day and age. Further, pipe insulation would be a ready fix if heat loss were in fact to be a problem.

- 2) The rejection of claims 4-6 under 35 § 103(a) as being unpatentable over Satoshi in view of Sakai and further in view of Faqih, is respectfully traversed.

In this rejection, Faqih is cited to teach a fan blowing air through the defroster. However, in traverse, it appears that Faqih only blows air against the surfaces of an evaporator and then directs the cool dry air back into a building. Thus, this appears to be more of an open circuit arrangement and quite different from the subject matter found in either of Satoshi or Sakai.

3) The rejection of claims 7-9 and 11 under 35 USC § 103(a) as being unpatentable in view of Satoshi in view of Faqih. However, this combination of references is defective for the same reason advanced above. That is to say, Faqih does not suggest to blow air through the defroster *per se*, and merely against something cold to cool the air for recirculation into a room or building. The disclosure of a fan such as found in Faqih does nothing to establish a *prima facie* case of obviousness.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 11-0219 and please credit any excess fees to such deposit account.

Respectfully submitted,
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Date: April 7, 2010
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